

Manufacturing in Southern California

- *Southern California is the number one "state" in the nation in manufacturing jobs*
- *Los Angeles County is still the number one metro area in manufacturing jobs*
- *The trend -- jobs down but manufacturing output up*
- *A tussle over industrial land*

March 2006



Economic Information & Research Department
Los Angeles County Economic Development Corp.
444 S. Flower St., 34th Floor, Los Angeles, CA 90071
Tel: 213-622-4300, 888-4-LAEDC-1, or 800-NEW-HELP
Fax: 213-622-7100 (in LA County)
<http://www.laedc.org> research@laedc.org

Table of Contents

Some Attention Yet!	1
What's the Real Story?.....	1
Still Number One.....	2
Whacked!.....	4
Trends by Metro Area.....	5
Nonemployers.....	11
Differences Among Areas	11
Industrial Real Estate.....	12
Lost in the Debate	13
How to Assess the Outlook for Manufacturing in Southern California	14
The SWOT.....	14
The Forecast.....	15
Some Important Thoughts on Manufacturing.....	16
What to Do?.....	16
Statistical Appendices.....	17

Written by Jack Kyser, Senior Vice President & Chief Economist, and Nancy D. Sidhu, Vice President & Senior Economist
Research support and production by George Huang

The LAEDC, the region's premiere business leadership organization, is a private, non-profit 501(c)3 organization established in 1981.

Our mission is to attract, retain, and grow business and jobs in Los Angeles County.

From 1996 through February 2006, the LAEDC has helped retain or create more than 111,000 jobs, providing \$3.9 billion in annual economic impact from salaries and \$72 million in annual tax revenue benefit to Los Angeles County.

:: Regional Leadership ::

The members of the LAEDC Board of Directors are civic leaders and ranking executives of the region's leading public and private organizations. Through financial support and direct participation in the mission, programs and public policy initiatives of the LAEDC, the board is committed to playing a decisive role in shaping the region's economic future.

:: Business Services ::

The LAEDC's Business Development and Assistance Program provides essential services to local businesses at no cost, including coordinating site searches, securing incentives and permits, identifying traditional and non-traditional financing including industrial development bonds. LAEDC also works with workforce training, transportation and utility providers.

:: Economic Information ::

Through our public information and for-fee research, LAEDC provides critical economic analysis to business decision-makers, media and government. We publish a wide variety of industry-focused and regional analyses, and our Economic Forecast has been ranked #1 by the Wall Street Journal.

:: Economic Consulting ::

The LAEDC consulting practice offers thoughtful, highly regarded economic and policy expertise to private- and public-sector clients. The LAEDC takes a flexible approach to problem solving, supplementing its in-house staff when needed with outside firms and consultants. Depending on our clients' needs, the LAEDC will assemble and lead teams for complex, long-term projects; contribute to other teams as a subcontractor; or act as sole consultant.

:: Global Connections ::

In conjunction with our World Trade Center Association Los Angeles-Long Beach subsidiary, the LAEDC facilitates international trade and investment in the region through a variety of strategic partnerships and initiatives, including facilitation of trade transactions and regular international missions for business opportunity development and external promotion of the region.

© 2006 Los Angeles County Economic Development Corporation

444 S. Flower St., 34th Floor, Los Angeles, CA 90071.

Web: www.laedc.org Tel: (213)622-4300, (888)4-LAEDC-1 Fax: (213)622-7100

Statistical information contained herein has been obtained from sources believed to be reliable but such accuracy cannot be guaranteed. The opinions expressed herein are subject to change without notice.

Some Attention Yet!

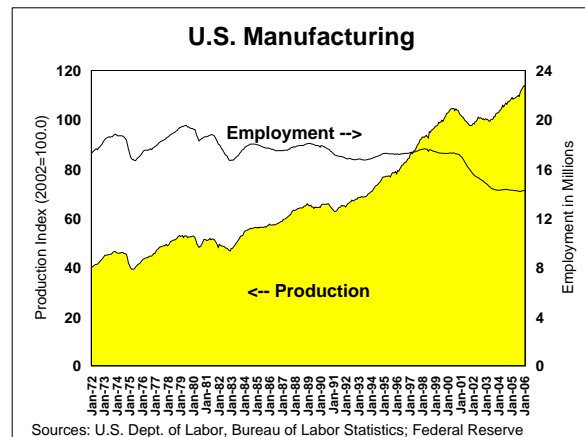
All of a sudden manufacturing or at least industrial land use is in the spotlight. Cities around Southern California have started to ask if the conversion of industrially zoned land and/or buildings to other uses is a good thing. This upsurge of interest is also symptomatic of a larger issue -- many areas in the region are running out of developable land. Intensifying the situation is strong investor interest in Southern California, with a lot of money chasing assets of all types, and a competition among various land uses.

Many people have written manufacturing off, since they measure its health by the employment count. In their view it is a declining activity. In Los Angeles and Orange counties in recent years, the employment trend has been down, but the Riverside-San Bernardino area has managed modest factory job gains. San Diego and Ventura counties have been holding steady.

What's the Real Story?

However, factory job counts don't tell the full story of what is going on.

- California manufacturing firms have emphasized productivity gains due to the cost of hiring new workers. Firms invest in plant and equipment to avoid adding staff. Nationally, there has also been a similar push on productivity. Despite declining job counts, output in manufacturing has been growing, as seen in the adjacent chart.
- Data from the Census Bureau's survey of manufacturing reveals that the value of shipments per employee in the state is increasing, which reflects that push on productivity.



- Manufacturing makes significant use of temporary help. These workers are counted in the Business Services industry.
- In many segments of manufacturing, there is "domestic outsourcing." People who work in other industries devote a significant amount of their time to provide inputs to a manufacturing sector, but are reported as working in other industry sectors. Apparel and textiles are good examples of this aspect.
- Many small or start-up manufacturing firms do not get captured by government statistics, for example "nonemployer" firms.

A related trend is that all the people reported as working in manufacturing are NOT working on an assembly line. In fact, in the local apparel and home furnishings industries, products are designed and samples produced, but when it comes time to churn out the product that is done overseas.

So manufacturing in the state and Southern California is more robust than often perceived though it faces many hurdles.

Still Number One

The latest data from the Bureau of Labor Statistics indicate that the Los Angeles "Metropolitan Division" (or Los Angeles County) retained its title of the nation's largest manufacturing center as measured by employment. The County's 2005 average of 470,400 jobs can be compared with number two Chicago's average of 396,100. Four other California metro areas made it in to the roster of the nation's top 20 manufacturing centers (which conveniently cuts off at 100,000 factory workers). These are Orange County, number 8 with a 2005 average of 182,700 jobs; San Jose, 10th with an average of 171,100 manufacturing jobs; Riverside-San Bernardino, 17th with 120,200 jobs; and San Diego, 19th, with 104,200 manufacturing jobs in 2005.

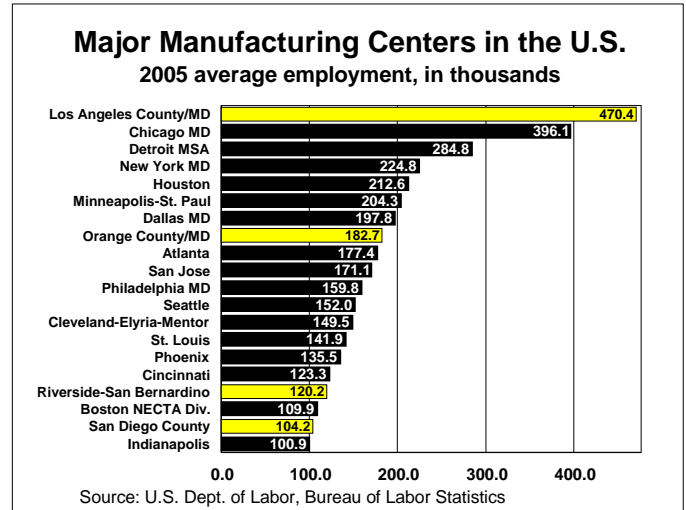


Table 1: Major Manufacturing Centers in the U.S.

(Annual average employment in thousands; metro areas with mfg. employment above 150,000 only)

Rank & Area	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
1 Los Angeles Co./MD	811.6	750.9	696.2	649.8	625.7	626.2	630.3	638.3	642.9	624.3	611.3	577.9	534.8	499.9	483.6	470.4
2 Chicago MD	570.5	541.7	527.7	530.5	537.8	551.4	543.7	545.8	546.5	525.4	515.4	481.6	441.0	412.8	400.8	396.1
3 Detroit MSA	359.2	340.5	340.2	343.5	364.7	372.5	369.4	368.5	373.6	378.6	388.1	355.9	329.3	309.4	295.9	284.8
4 New York MD	474.1	429.9	407.7	392.4	379.8	371.1	360.6	360.6	351.6	337.2	323.0	294.1	266.3	246.2	235.7	224.8
5 Houston	201.5	206.5	202.8	202.5	207.8	216.5	225.3	235.1	243.8	231.5	231.6	233.8	221.6	210.0	207.9	212.6
6 Minneapolis-St. Paul	215.8	211.7	212.7	215.6	220.7	229.4	232.1	234.6	236.7	236.1	236.6	226.1	211.3	204.0	202.7	204.3
7 Dallas MD	222.9	212.9	208.8	212.2	215.5	221.3	225.6	234.6	242.6	240.9	241.9	231.5	210.0	197.2	195.9	197.8
8 Orange County MD	231.3	212.3	201.1	190.3	189.1	190.7	200.4	208.7	214.5	213.3	216.7	208.5	190.8	183.8	183.5	182.7
9 Atlanta	186.9	178.8	181.1	184.5	191.2	199.3	202.7	206.4	209.2	210.1	207.2	197.1	186.0	179.2	177.5	177.4
10 San Jose	250.3	240.1	225.2	220.6	215.3	225.1	240.0	249.4	248.2	237.2	254.2	243.0	203.6	182.8	174.2	171.1
11 Philadelphia MD	246.6	230.8	220.9	216.4	215.3	213.1	210.5	210.5	209.9	206.1	205.5	198.7	186.4	171.3	163.9	159.8
12 Seattle	202.8	199.2	195.7	185.6	176.1	175.1	184.0	206.2	216.5	201.7	188.9	180.7	164.1	149.0	145.4	152.0

Source: U.S. Dept. of Labor, Bureau of Labor Statistics

The job count news was generally bad for most of the nation's largest manufacturing centers in 2005. However, gains over 2004 were recorded in the Houston, Minneapolis-St. Paul, Dallas, Seattle and Phoenix areas.

One other interesting statistic: if you add together the six major Southern California counties (including San Diego County), the 2005 annual manufacturing employment was 915,900 jobs. Take them away from California and the remainder of the state would slide down to a 7th place ranking. As for the six-county area, they would be the largest manufacturing center in the nation, ahead of number two Texas. Manufacturing has definitely not gone away!

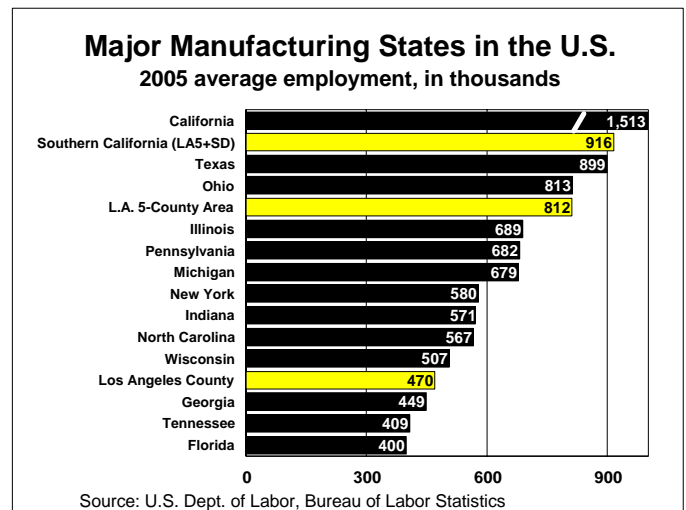


Table 2: State Manufacturing Employment

(Annual average employment in thousands; states with mfg. employment above 400,000 only)

Rank&State/Area	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
1 California	1,967	1,892	1,794	1,701	1,689	1,721	1,778	1,830	1,861	1,834	1,862	1,790	1,643	1,553	1,533	1,513
SoCal(LA5+SD)	1,278	1,193	1,120	1,056	1,037	1,044	1,068	1,102	1,129	1,115	1,112	1,065	991	942	930	916
2 Texas	948	936	929	942	966	995	1,017	1,045	1,077	1,063	1,068	1,027	949	900	891	899
3 Ohio	1,065	1,023	994	981	1,004	1,037	1,030	1,028	1,031	1,028	1,021	953	885	843	822	813
L.A. 5-Co. Area	1,155	1,074	1,008	950	931	937	958	984	1,005	992	990	946	879	837	826	812
4 Illinois	915	876	855	860	878	894	899	902	906	882	871	815	754	714	697	689
6 Pennsylvania	947	909	888	875	878	879	865	869	872	863	862	821	759	712	690	682
5 Michigan	838	793	796	806	848	873	866	873	890	898	897	820	760	716	697	679
7 New York	983	910	870	836	816	810	797	797	792	773	751	708	652	613	597	580
9 Indiana	609	590	601	614	625	651	646	651	657	665	664	615	588	573	572	571
8 North Carolina	824	785	796	813	817	821	808	800	796	777	758	704	644	599	577	567
10 Wisconsin	523	513	517	526	546	567	568	579	593	595	594	560	528	504	503	507
Los Angeles Co.	812	751	696	650	626	626	630	638	643	624	611	578	535	500	484	470
11 Georgia	506	483	491	511	526	540	544	547	545	543	531	498	467	452	448	449
12 Tennessee	493	480	493	503	514	518	502	498	499	495	488	454	429	413	412	409
13 Florida	493	463	457	463	459	464	470	471	467	463	463	440	413	395	396	400

Source: U.S. Dept. of Labor, Bureau of Labor Statistics

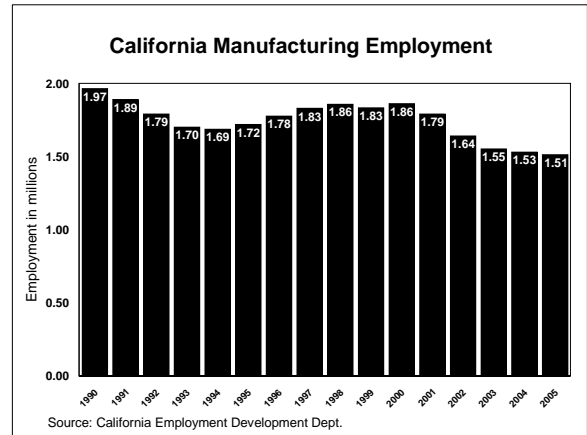
Signature Products "Made in Southern California"

A wide array of products have been designed and produced in the Los Angeles area. Many are a melding of manufacturing know-how and creativity. A short list includes:

- The Hula Hoop
- Frisbee
- Chaise longues
- The Fender Stratocaster guitar
- Fortune cookie
- Polyurethane surf board
- Barbie
- Modern swim suit (something that you could actually swim in)
- Audio-animatronic figures
- Toothwhitening toothpaste
- Implantable collamer lenses
- The Douglas DC-3 (first commercially viable passenger plane, which was followed by a family of airliners)
- Lockheed Constellation
- SR-71 (reconnaissance plane)
- F-117 (first stealth fighter)
- B-2 (stealth) bomber
- C-17 military cargo plane
- The Space Shuttle
- The Mars Rovers
- Epogen/neupogen (biotech blockbuster drugs)

Whacked!

Still, manufacturing job losses have been significant, nationally, in the state and in Southern California. Between 1990 and 2005, the state lost 454,400 factory jobs while the Los Angeles five-county area saw 251,200 jobs disappear. Los Angeles County accounted for 341,200 of those. The County had severe exposure in two sectors. One was "aerospace products" where 91,600 jobs were lost between 1990 and 2005, reflecting the drastic defense downsizing after the end of the Cold War. The County was also exposed in apparel manufacturing, where many production jobs have gone offshore.



But California was not unique in taking a beating. Other states losing large numbers of factory jobs include New York, Ohio and Michigan. Many of these were good paying jobs with benefits. There will be further employment losses, especially in Michigan and Ohio, as U.S. auto and parts producers downsize.

Table 3: Employment Change in the Top 10 States in Manufacturing -- 1990 vs. 2005

Rank & State/Area	1990	2005	Chg.	% Chg.
1 California	1,967.1	1,512.7	-454.4	-23%
Southern California (LA5+SD)	1,278.0	915.9	-362.1	-28%
2 Texas	947.7	898.6	-49.1	-5%
L.A. 5-County Area	1,064.6	813.4	-251.2	-24%
3 Ohio	1,154.5	811.7	-342.8	-30%
4 Illinois	914.6	689.1	-225.5	-25%
5 Michigan	947.1	681.8	-265.3	-28%
6 Pennsylvania	837.6	678.8	-158.8	-19%
7 New York	983.1	580.1	-403.0	-41%
8 North Carolina	609.1	571.2	-37.9	-6%
9 Indiana	823.9	566.6	-257.3	-31%
10 Wisconsin	523.0	506.5	-16.5	-3%
Los Angeles County	811.6	470.4	-341.2	-42%

Source: U.S. Dept. of Labor, Bureau of Labor Statistics

Table 4: Employment Change in the Top 10 Metro Areas in Manufacturing -- 1990 vs. 2005

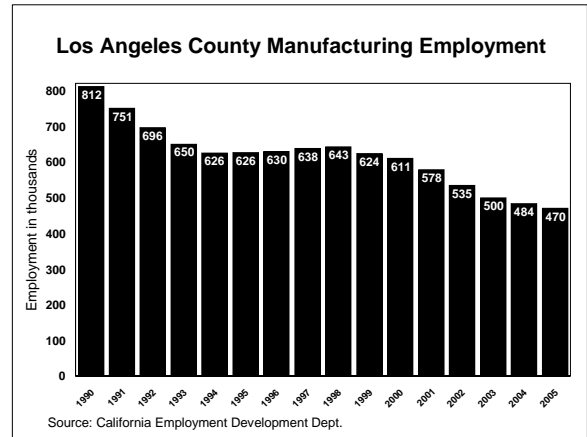
Rank & Area	1990	2005	Chg.	% Chg.
1 Los Angeles County/MD	811.6	470.4	-341.2	-42%
2 Chicago MD	570.5	396.1	-174.4	-31%
3 Detroit MSA	359.2	284.8	-74.4	-21%
4 New York MD	474.1	224.8	-249.3	-53%
5 Houston	201.5	212.6	11.1	6%
6 Minneapolis-St. Paul	215.8	204.3	-11.5	-5%
7 Dallas MD	222.9	197.8	-25.1	-11%
8 Orange County MD	231.3	182.7	-48.6	-21%
9 Atlanta	186.9	177.4	-9.5	-5%
10 San Jose	250.3	171.1	-79.2	-32%

Source: U.S. Dept. of Labor, Bureau of Labor Statistics

Trends by Metro Area

Los Angeles County

The largest manufacturing sector in the County during 2005 was apparel with an average of 61,500 jobs. Computer & electronic products with an average of 60,500 jobs was right on its heels, while number three was transportation equipment (including aerospace) with an average of 51,900 jobs in 2005. In terms of job loss between 1990 and 2005, transportation equipment took the biggest hit (-104,300 jobs), followed by computers (-66,400 jobs). This reflected the defense cutbacks of the early 1990s.



However, there are twists to some of these industries. Research done for the California Fashion Association reveals that about 6,800 people do significant work for local apparel firms but are classified in other industry segments. And if you wanted to be a tad more precise about "aerospace," you would have to take communications and navigation equipment out of computers and electronic products and combine them with aerospace products, yielding a 2005 employment count of 68,000 workers. Thus, you could label aerospace the County's largest manufacturing sector.

Table 5: Employment in the Largest Manufacturing Sectors in Los Angeles County

Sector	1990	2005	Num. chg.	% chg.
Apparel	90,200	61,500	-28,700	-31.8%
Computer & electronic products	126,900	60,500	-66,400	-52.3%
Transportation equipment	156,200	51,900	-104,300	-66.8%
Aerospace	130,000	38,400	-91,600	-70.5%
Fabricated metal products	75,300	48,200	-27,100	-36.0%
Food	47,700	43,400	-4,300	-9.0%
Furniture	38,300	25,500	-12,800	-33.4%
Printing (non-newspaper)	36,100	23,500	-12,600	-34.9%
Chemicals	24,700	22,000	-2,700	-10.9%
Machinery	37,700	19,600	-18,100	-48.0%
Plastics & rubber products	28,800	18,300	-10,500	-36.5%
Wood products	27,300	14,400	-12,900	-47.3%
Electrical equipment & appliances	25,100	11,000	-14,100	-56.2%
Textile mills	8,300	10,700	2,400	28.9%
Paper	15,100	10,400	-4,700	-31.1%

Source: California Employment Development Department

By employment size distribution, 6,635 manufacturing firms in the County have between 1 and 4 employees (this is according to the California Employment Development Department, whose data set does not capture really small firms or those with only family members at work). At the other end of the scale, there are 78 manufacturing firms in the County with 500 or more workers. Regardless of employment size, all categories have fewer firms today than they did a few years ago.

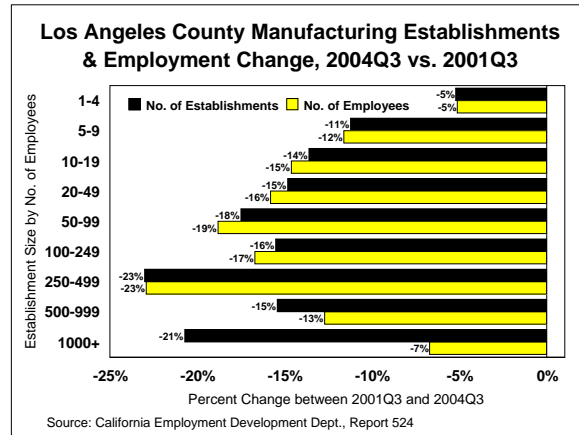
What about the actual number of employees by firm size? The largest concentration, 103,321 workers, is found in firms with 100-249 workers which is part of the fabled "middle market." Large

manufacturers (500 or more employees) employ 95,669 persons (19.9% of the factory workforce), which is slightly larger than the population of the city of Santa Monica.

Table 6: Size Distribution of Manufacturing Firms in Los Angeles County, 2004Q3

Emp. Sz. of Estab.	No. of Estab.	% of Total	Total No. of Employees	% of Total
1 - 4	6,635	39.1%	11,073	2.3%
5 - 9	3,054	18.0%	20,554	4.3%
10 - 19	2,709	16.0%	37,001	7.7%
20 - 49	2,584	15.2%	79,236	16.5%
50 - 99	1,040	6.1%	71,485	14.9%
100 - 249	694	4.1%	103,231	21.5%
250 - 499	181	1.1%	62,429	13.0%
500 - 999	55	0.3%	36,190	7.5%
1000+	23	0.1%	59,479	12.4%
Total	16,975	100.0%	480,678	100.0%

Source: California Employment Development Department



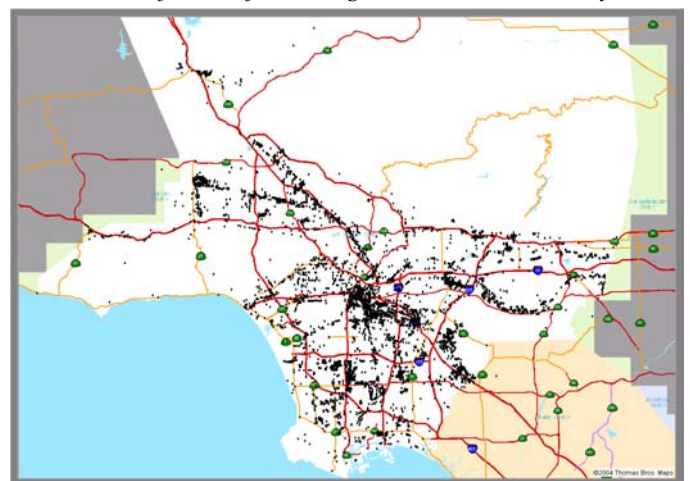
Los Angeles County is physically large. Where is the largest concentration of manufacturing jobs? The North Gateway or southeast area of the County had 104,513 manufacturing jobs at mid-2005, making it a solid number one. In second place was the South Bay with 86,540 factory jobs, followed by the San Fernando Valley with 76,202 jobs. Right on its heels was the San Gabriel Valley with 75,632 factory jobs. As can be imagined, the job trend has not been positive in most of these areas between 1991 and 2005. The only area in the County that bucked the trend was Santa Clarita. The largest manufacturing jobs losses since 1990 were recorded by the South Bay (-55,686 jobs), and the San Fernando Valley (-53,224 jobs). Both had heavy concentrations of aerospace jobs. Also seeing a significant erosion of factory employment were Lakewood/Long Beach (-34,010 jobs -- aerospace again), North Gateway (-30,503 jobs), and the San Gabriel Valley (-29,225 jobs). Several of these areas were able to offset the manufacturing job losses with growth fueled by international trade and logistics.

Table 7: Manufacturing Employment by Region of Los Angeles County, 2005Q2

Region	No. of Estab.	Employment	Payroll (\$mil.)	Avg. Wage(\$)	% of Emp. in Durable
West San Fernando Valley	1,083	32,151	443.5	55,178	73.1%
East San Fernando Valley	1,697	44,051	480.1	43,595	59.2%
Santa Clarita/Valencia	274	10,680	129.8	48,631	72.6%
Antelope Valley	122	5,009	79.8	63,742	90.8%
San Gabriel Valley	2,894	75,632	746.3	39,469	54.8%
East L.A.-Eagle Rock	737	19,758	163.5	33,109	27.4%
Westside	668	9,274	138.2	59,624	57.5%
South Bay/LAX	1,775	86,540	1,414.2	65,368	76.4%
Long Beach-Lakewood	459	19,550	333.0	68,133	87.7%
North Gateway	2,872	104,513	998.4	38,213	45.7%
South L.A.	1,021	22,921	153.3	26,749	24.5%
Crenshaw/Mid-City/Hly'wd	543	7,546	71.0	37,648	36.6%
Central/Downtown L.A.	1,734	24,617	162.7	26,438	13.1%
Undesignated/Remainder	160	7,883	137.3	69,688	
Total of LA County	16,039	470,125	5,451.4	46,382	55.9%

Source: California Employment Development Department

Location of Manufacturing Firms in LA County



Orange County

The County has also lost manufacturing workforce, as the 2005 annual average of 182,700 workers was 48,600 jobs below the 1990 average. The largest sector in 2005 was computer and electronic products, with an average of 42,500 jobs. There was a tight race for the second spot between fabricated metal products (22,800 jobs) and beverage and tobacco products (21,900 jobs).

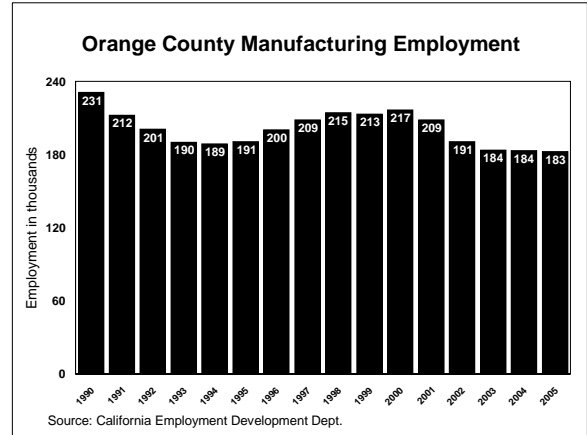


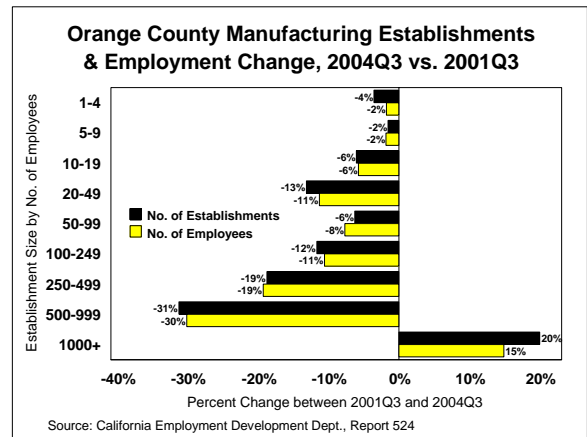
Table 8: Employment in the Largest Manufacturing Sectors in Orange County

Sector	1990	2005	Num. chg.	% chg.
Computer & electronic products	58,100	42,500	-15,600	-26.9%
Fabricated metal products	23,100	22,800	-300	-1.3%
Beverage and tobacco products	30,600	21,900	-8,700	-28.4%
Transportation equipment	25,900	17,000	-8,900	-34.4%
Aerospace	20,900	11,300	-9,600	-45.9%
Textiles & apparel	11,500	12,600	1,100	9.6%
Machinery	16,900	11,000	-5,900	-34.9%

At first glance, Orange County has a small-to-medium sized manufacturing base. The largest number of firms, 2,177, had between 1 and 4 employees, while there were 34 firms with 500 or more workers. As to actual number of manufacturing employees, the largest number was at firms with 500 or more employees, 38,494 people on payroll. The second largest number of employees, 37,394, were at firms with 100-249 workers. Thus, Orange County has more of an orientation to large firms than does Los Angeles.

Table 9: Size Distribution of Manufacturing Firms in Orange County, 2004Q3

Emp. Size	Estab.	% of Ttl	No. of Emp.	% of Ttl
1 - 4	2,177	37.0%	3,790	2.1%
5 - 9	1,074	18.3%	7,206	3.9%
10 - 19	965	16.4%	13,162	7.2%
20 - 49	897	15.3%	28,273	15.4%
50 - 99	403	6.9%	27,817	15.1%
100 - 249	249	4.2%	37,394	20.3%
250 - 499	82	1.4%	27,709	15.1%
500 - 999	22	0.4%	14,744	8.0%
1000+	12	0.2%	23,750	12.9%
Total	5,881	100.0%	183,845	100.0%



Where are the factory jobs in Orange County? The answer is "North County" with 119,666 employees. This area has also taken the brunt of manufacturing cutbacks, with a loss 27,040 jobs between 1991 and 2005. South County, which is still in the development phase, saw a very small loss of 546 factory jobs.

Table 10: Manufacturing Employment by Region of Orange County, 2005Q2

Region	Estab.	Employ.	Payroll (\$mil.)	Avg.Wage(\$)	% of Emp. in Dur.
North County	3,797	119,666	1,510.9	50,505	69.0%
South County	1,799	60,577	869.5	57,415	71.8%
Undesignated as to area	93	2,593	40.3	62,148	
Total of Orange County	5,689	182,836	2,420.7	52,959	70.1%

Source for all tables on this page: California Employment Development Department

Riverside-San Bernardino Area

Manufacturing employment in this area has held steady in the last few years, and is actually up by 42,300 jobs since 1990. One of the secrets of this success is the availability of factory space in a wide range of sizes, at rental rates lower than found in either Los Angeles or Orange counties.

The largest manufacturing sector is fabricated metal products, with a 2005 annual average of 16,900 jobs. A good chunk of these jobs are in "architectural & structural metals." The second largest manufacturing segment in the area is textile mills and apparel, with an average of 14,200 jobs in 2005, followed by transportation equipment with an average of 13,900 jobs. In the past, this used to mean RVs and manufactured housing, but the area's aerospace subcontractors have snagged some nice contracts on the Boeing 787.

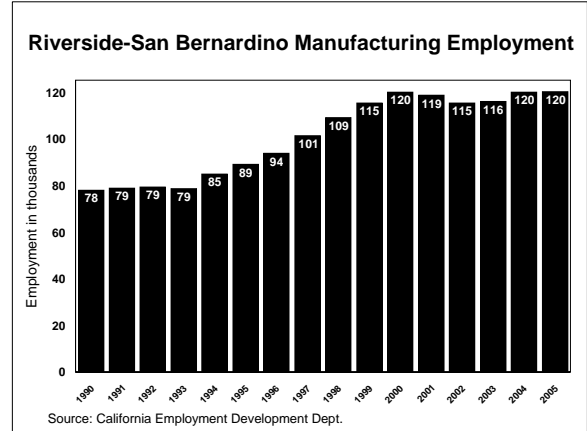


Table 11: Employment in the Largest Manufacturing Sectors in Riverside-San Bernardino

Sector	1990	2005	Num. chg.	% chg.
Fabricated metal products	9,400	16,900	7,500	79.8%
Textile mills	9,400	14,200	4,800	51.1%
Transportation equipment	11,800	13,900	2,100	17.8%
Plastics & rubber products	6,200	11,100	4,900	79.0%

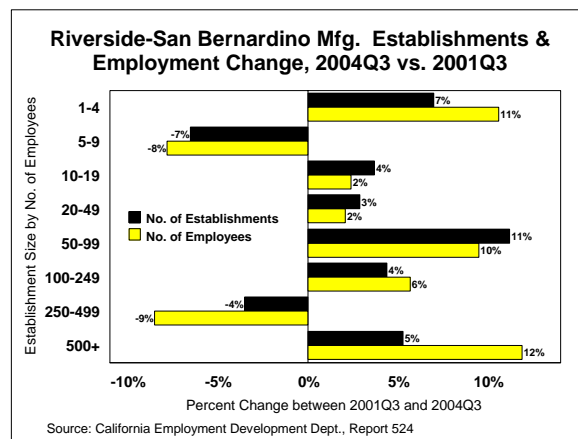
Source: California Employment Development Department

By firm employment size, 1,404 establishments in the two-county area have 1-4 employees. By actual number of workers, the 100-249 employees segment is the biggest with 32,093 jobs. There were 20 firms in the two-county area with 500 or more employees and their job count was 16,152.

Table 12: Size Distribution of Manufacturing Firms in Riverside-San Bernardino, 2004Q3

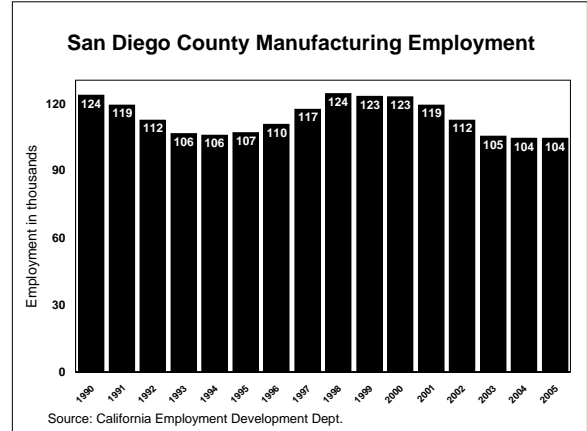
Emp. Sz. of Estab.	No. of Estab.	% of Total	Total No. of Employees	% of Total
1 - 4	1,404	37.5%	2,492	2.1%
5 - 9	588	15.7%	3,962	3.3%
10 - 19	566	15.1%	7,751	6.5%
20 - 49	612	16.3%	18,875	15.7%
50 - 99	287	7.7%	19,776	16.5%
100 - 249	212	5.7%	32,093	26.8%
250 - 499	55	1.5%	18,748	15.6%
500+	20	0.5%	16,152	13.5%
Total	3,744	100.0%	119,849	100.0%

Source: California Employment Development Department



San Diego County

Manufacturing employment in the County has been moving more or less sideways over the last few years, with the 2005 average at 104,200 jobs. However, this represented a loss of 19,300 jobs since 1991. Detail on major manufacturing sectors from the State Employment Development Department (EDD) is rather sparse. According to EDD, the largest sector is computer & electronic products with a 2005 average of 26,400 employees, followed by transportation equipment with 13,900 jobs. The largest component of the latter is aerospace (the Predator UAV is made in the County).



Nondurable goods production is lumped all together, but County Business Patterns reveals that the largest component is food products with about 6,300 jobs, followed by apparel & textile products with about 3,800 workers.

Table 13: Employment in the Largest Manufacturing Sectors in San Diego County

Sector	1990	2005	Num. chg.	% chg.
Computer & electronic products	32,500	26,400	-6,100	-18.8%
Total of non-durable goods	22,900	25,400	2,500	10.9%
Transportation equipment	31,100	13,900	-17,200	-55.3%
Aerospace	22,900	5,600	-17,300	-75.5%

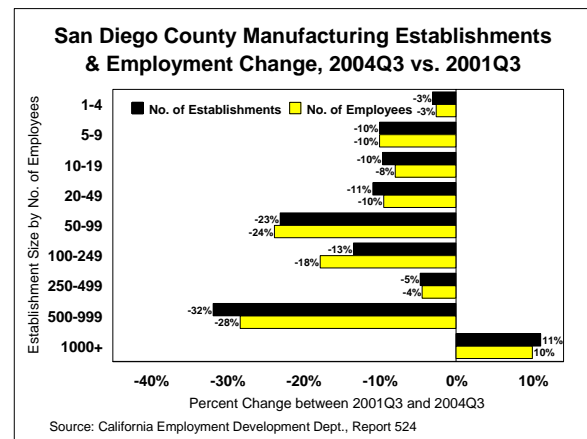
Source: California Employment Development Department

By employment size, 1,538 manufacturing firms in the County have 1-4 employees. Firms with 100-249 employees had 20,853 workers. There were 25 firms in the County with 500 or more factory jobs and they employed 28,739 manufacturing workers. Thus, San Diego County also has an orientation to larger firms..

Table 14: Size Distribution of Manufacturing Firms in San Diego County, 2004Q3

Emp. Sz. of Estab.	No. of Estab.	% of Total	Total No. of Employees	% of Total
1 - 4	1,490	42.4%	2,585	2.5%
5 - 9	610	17.4%	4,117	3.9%
10 - 19	548	15.6%	7,621	7.3%
20 - 49	467	13.3%	14,507	13.8%
50 - 99	188	5.4%	13,118	12.5%
100 - 249	142	4.0%	20,853	19.9%
250 - 499	41	1.2%	13,471	12.8%
500 - 999	15	0.4%	10,540	10.0%
1000+	10	0.3%	18,199	17.3%
Total	3,511	100.0%	105,011	100.0%

Source: California Employment Development Department



Ventura County

Manufacturing employment in the County in 2005 averaged 38,400 jobs. This was down by 3,000 jobs from the peak (in this data series) of 41,400 persons reached in 2000. The largest manufacturing industry in the County is computer & electronic products, with a 2005 average of 8,800 jobs (little changed from 1990). A close number two is chemicals, which includes drugs, with a 2005 average of 8,400 jobs (the County is home to Amgen). Number three is food products with 5,600 jobs. The County still has a sizable agricultural base, due to anti-sprawl measures.

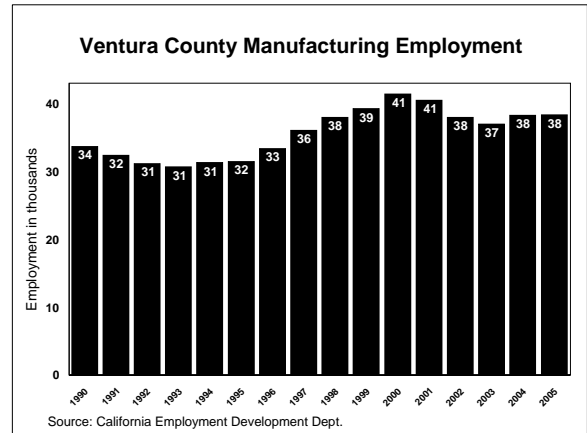


Table 15: Employment in the Largest Manufacturing Sectors in Ventura County

Sector	1990	2005	Num. chg.	% chg.
Computer & electronic products	8,900	8,800	-100	-1.1%
Chemical	1,300	8,400	7,100	546.2%
Food	6,400	5,600	-800	-12.5%

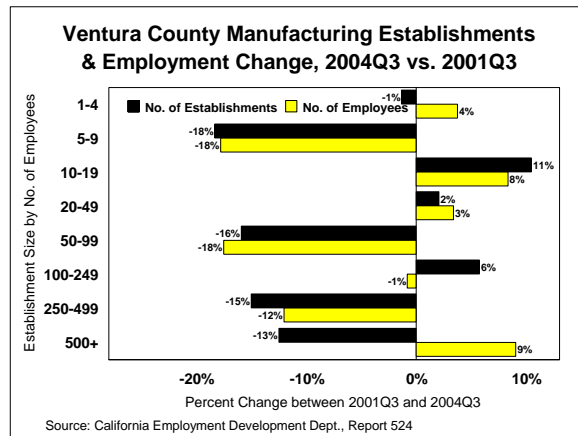
Source: California Employment Development Department

By employment size, again the largest number of firms, 444, had 1-4 employees. Firms with 100-249 employees had 8,038 people on their payrolls. There were seven firms in the County with 500 or more factory jobs, and the job count of 11,166 was the largest of any of the employment size groupings.

Table 16: Size Distribution of Manufacturing Firms in Ventura County, 2004Q3

Emp. Sz. of Estab.	No. of Estab.	% of Total	Total No. of Employees	% of Total
1 - 4	444	41.3%	816	2.1%
5 - 9	165	15.4%	1,126	2.9%
10 - 19	169	15.7%	2,306	6.0%
20 - 49	143	13.3%	4,488	11.6%
50 - 99	74	6.9%	4,890	12.7%
100 - 249	55	5.1%	8,038	20.8%
250 - 499	17	1.6%	5,734	14.9%
500 - 999	4	0.4%	2,800	7.3%
1000+	3	0.3%	8,366	21.7%
Total	1,074	100.0%	38,564	100.0%

Source: California Employment Development Department



Nonemployers

This may sound like an oxymoron, but there are many very small manufacturing firms with no paid employees. They do not get picked up by the traditional employment surveys, yet they do have an impact. Data is available from the Census Bureau on "zero employee" firms who pay federal income taxes, but report no employees because they have none or the workers are family members. In California in 2003, there were over 2.3 million of these establishments, and 41,572 were in manufacturing. The six Southern California counties had 25,727 nonemployer manufacturing firms, or 60.8% of the state total. Would these firms be considered to be in the underground economy? No. They do file tax returns.

The number of these small manufacturing entities has been holding steady since 1997. No data on number of workers is published, but figure at least one worker per firm (the owner).

Differences Among Areas

There is a significant difference among the local areas in concentration of employees at larger firms with 500 or more employees. In the Riverside-San Bernardino area, just 13.5% of the manufacturing workforce is employed at large firms, while in Ventura County it was 29.0%. In San Diego County, 27.4% of the factory workforce is at large firms, while Los Angeles and Orange counties are in the middle, with readings of 19.9% and 20.9%, respectively.

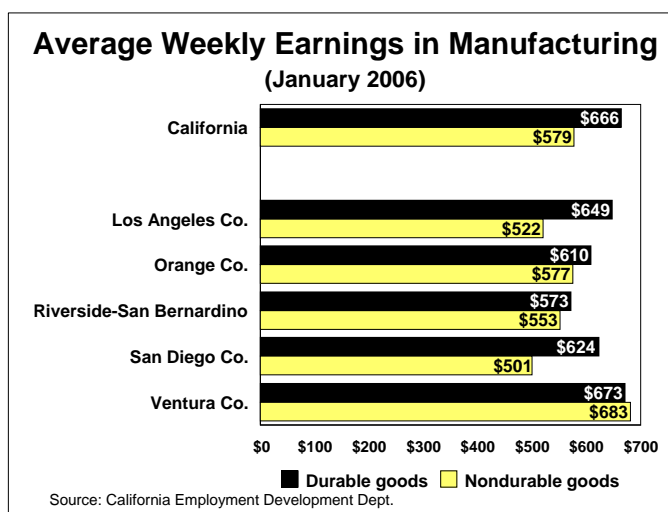
Another difference is the split between factory workforces in durable versus nondurable manufacturing. Los Angeles County has an outsized exposure to the latter, with 44.2% of its manufacturing employees in the sector. Many of these jobs are susceptible to off-shoring. At the other end of this spectrum is Ventura County where only 24.4% of factory employment is in the nondurable sector, despite the presence of Amgen, P&G, and the food products industry.

A related difference is the level of wages earned by manufacturing employees in the different counties. These reflect differences between durable and non-durable industries, unionized vs. non-unionized companies, and cost of living.

Table 17: Shares of Manufacturing Employment, 2005

	Durable	Nondurable
	Goods	Goods
California	64.0%	36.0%
Los Angeles County	55.8%	44.2%
Orange County	70.1%	29.9%
Riverside-San Bernardino	71.2%	28.8%
San Diego County	75.5%	24.4%
Ventura County	63.5%	36.5%

Source: California Employment Development Department



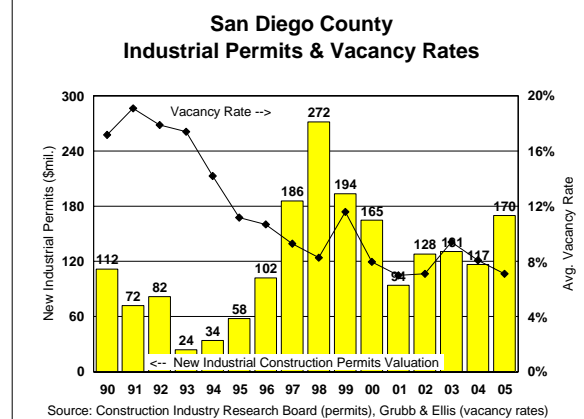
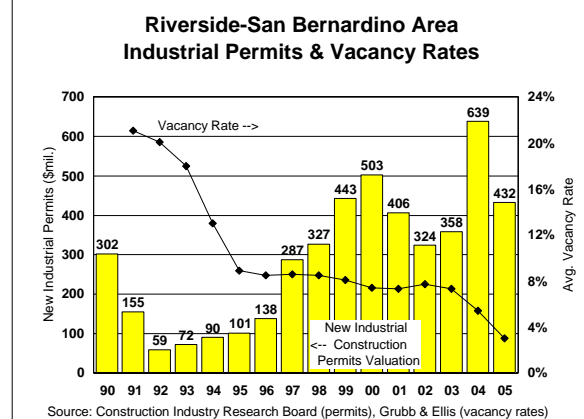
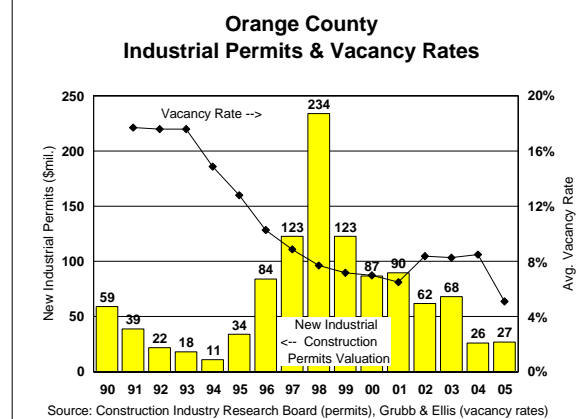
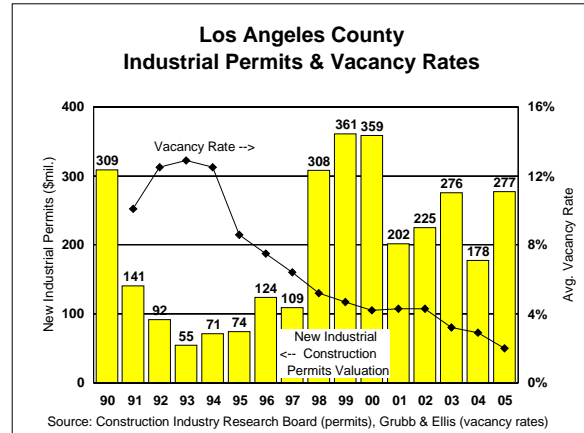
Industrial Real Estate

This was the spark that set off the current round of discussions about what is happening to manufacturing in Southern California. As noted earlier, developable land is becoming scarce in the urbanized areas of Southern California. Residential developers are on the prowl for sites that can be purchased or buildings that can be converted from industrial to residential use (the trendy lofts). Given the run-up in residential prices, the economics of land use in the region means that industrial loses out to residential and retail, since this land is comparatively cheap.

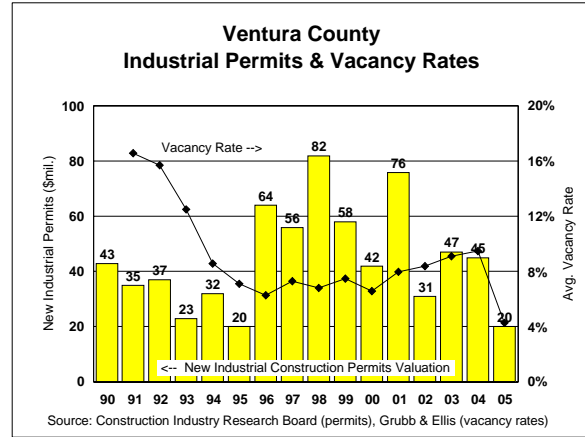
When people talk about industrial real estate, they usually refer to factories. However, there are many users of industrial space in the region. Besides "manufacturing," industrial space users include wholesale trade, warehousing & storage, newspaper and book publishing (these used to be classified as manufacturing but are now counted in "information"), and motion picture/TV production. In Los Angeles County, the 2005 employment average for these activities combined was 849,900 jobs, compared with the peak of 1,174,900 jobs in 1990. The bulk of the employment loss between 1990 and 2005 was in manufacturing (-341,200 jobs), while wholesale trade lost 10,200 jobs and newspaper publishing lost 7,400 jobs. Warehousing and storage was essentially flat (-1,400 jobs), while motion picture production saw an increase of 35,200 jobs.

International trade is an important driver of industrial demand in the region. Many jobs in this sector are not captured by statistical agencies, for example the truck drivers at the ports. And "independent contractors" account for a significant share of employment in the entertainment industry. Thus, the actual employment counts are larger than officially published numbers.

And yet Los Angeles County and the Riverside-San Bernardino area are the two strongest industrial markets in the nation as measured by vacancy rates. In Los Angeles at year-end 2005, the rate was 2.0%, while the Riverside-San Bernardino checked in with a 2.8% rate. Ventura County was right behind with a 2.9% industrial vacancy rate. Orange County's industrial vacancy rate was 5.1%, while San Diego County was at 6.8%.



Compounding the problem is the previously mentioned shortage of land. Even in the western end of the Riverside-San Bernardino area, which is considered land-rich, large (100 acres or more) blocks of land are becoming hard to find. Developers are moving further east along the I-10 or going up over the Cajon Pass into the High Desert. One aspect to the quest for logistics space for the international trade industry is what is the final destination of the goods? Are they mainly for the Southern California market? Closer to the ports is better. Or are they destined for the rest of the U.S., in which case you can be farther away from the ports.



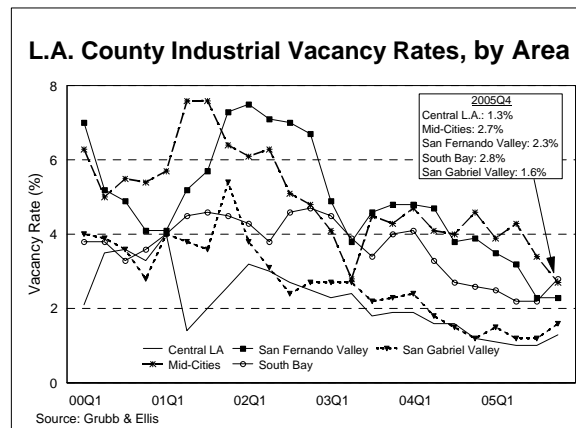
Still another problem is that new industrial construction in much of Southern California was down in 2005. Riverside County saw industrial building permit values decline by 45.8% from 2004, San Bernardino County saw a 72.0% slippage, while Ventura County was down by 55.6%. In the plus column were Los Angeles County (+55.6%), and San Diego County (+45.2%). Orange County had an increase of 3.8%, but the dollar increase in permit values was modest, from \$26 million to \$27 million.

The amount of industrial space in the six county-area is quite large. There is over 1.7 billion square feet of existing space (56.6% of which is in Los Angeles County). An additional 31.1 million square feet is under construction, of which 73.2% is in the Riverside-San Bernardino area.

Table 18: Industrial Space Inventory

Area	Total Sq. Ft. Available (000 s.f.)	Sq. Ft. Under Construction (000 s.f.)
	Los Angeles County	972,967
Orange County	267,491	790
Riverside-San Bernardino	317,483	22,778
San Diego County	159,832	3,299
Total	1,717,772	31,127

Source: Grubb & Ellis



Lost in the Debate

The tension between industrial versus residential use will rage on, with the latter's supporters pointing out that there is a huge need for more housing units. The reasoning is that the number of manufacturing jobs is declining, so the space can be readily converted. Lost in all the debate is the fact that most of the new housing units being developed on old industrial sites, especially in the urban core, are expensive, and do little to address the real shortage of more affordable housing.

Worse yet, conversion of industrial land to residential means that people lose their jobs. Conversion proponents have not addressed that issue.

How to Assess the Outlook for Manufacturing in Southern California

The SWOT

The best way to assess what the future might bring for manufacturing in the region is to do a SWOT analysis: strengths, weaknesses, opportunities and threats.

Strengths

- Large diverse industrial base in a large diverse regional market.
- Extensive support infrastructure (specialized supplier firms).
- Outstanding transportation access.
- Large labor pool.
- Base of small-to-medium sized firms -- are agile but fragile.
- Huge R&D capacity available -- but is it being used to maximum advantage?
- High/fine tolerance production capability.
- Creative capacity of the region.

Weaknesses

- A perceived hostile business environment due to state and local government regulations.
- High costs of Worker's Compensation Insurance, especially for smaller firms.
- High energy costs (but incentive programs are out there).
- Lack of land for new industrial development in Los Angeles and Orange counties. This is also a growing issue for the west end of the Riverside-San Bernardino area.
- Competition for industrial land from other uses -- residential and mixed-use.
- Growing congestion on the region's highway and rail networks -- the failure of the proposed state infrastructure bond to make it on the June ballot was a blow.
- Aging industrial facilities and infrastructure.
- "Gazelle" or fast growing firms often get purchased by out-of-area firms.
- Manufacturing has not made a case as to why it is important and tends to be ignored by both government decision makers and business thought leaders.

Opportunities

- "Quick-turn" production capability.
- "Design-intensive" products.
- Colleges & universities can step-up business spin-offs.
- International business links.

- LA is the global capital of "pop" culture -- some may wince but it equals business opportunities.
- Costs of overseas production are creeping up while transportation infrastructure is under pressure, which could result in slower transit times for imported goods.

Threats

- Attitude of the California legislature that business can "take anything" they throw at it -- emphasis on social issues versus maintaining a healthy economic base.
- China and India.
- Image of manufacturing as being "dirty" and causing environmental problems.
- Disconnect between business needs and training at high schools and community colleges -- industrial arts in high schools would be good. Joint specialized training programs at community colleges would be even better.

The Forecast

What's the outlook for manufacturing employment in 2006? Unfortunately, there will be continued declines, with California expected to see a loss of 8,500 jobs, while Los Angeles County should see a decline of 5,000 jobs. Orange County is expected to see a loss of 1,000 factory workers in 2006, while San Diego County should see a modest decline of 500.

The gainers in 2006 are expected to be Ventura County, +300 factory jobs, and the Riverside-San Bernardino area, +200 jobs.

Table 19: Manufacturing Employment in Southern California

	Los Angeles County	Orange County	Riverside-San Bernardino	San Diego County	Ventura County
1990	811.6	231.3	77.9	123.5	33.7
1991	750.9	212.3	78.8	119.0	32.4
1992	696.2	201.1	79.3	112.2	31.2
1993	649.8	190.3	78.7	106.2	30.7
1994	625.7	189.1	84.8	105.6	31.3
1995	626.2	190.7	89.0	106.8	31.5
1996	630.3	200.4	93.7	110.4	33.4
1997	638.3	208.7	101.3	117.1	36.1
1998	642.9	214.5	109.1	124.0	38.0
1999	624.3	213.3	115.3	122.9	39.3
2000	611.3	216.7	120.1	122.6	41.4
2001	577.9	208.5	118.6	119.0	40.5
2002	534.8	190.8	115.4	112.3	38.0
2003	500.0	183.9	116.1	105.3	37.1
2004	483.6	183.5	120.1	104.3	38.3
2005	470.4	182.7	120.2	104.2	38.4
2006f	465.4	181.7	120.4	103.7	38.7

Sources: California Employment Development Department; 2006 forecast by LAEDC

Some Important Thoughts on Manufacturing

- ☞ Don't measure the health of manufacturing just by the job counts.
- ☞ Most manufacturing jobs pay well and frequently offer benefits.
- ☞ Manufacturing works with the demographics of the region. Unfortunately, there is a high school drop-out rate in the Latino community. Manufacturing does offer an opportunity for these young people to enter the middle class rather than face life in fast-food restaurants.
- ☞ Manufacturing is a large customer of other business sectors, such as professional and business services and financial services. People who are willing to "let manufacturing go" may be cutting their own business throats.
- ☞ Manufacturing can generate point-of-sale tax revenue.
- ☞ Manufacturing uses city services and requires permits -- additional city revenues.
- ☞ Manufacturing provides inputs for other key regional industries, such as bio-medical and motion picture production.

What to Do?

Manufacturing in Southern California will not completely go away. Projects for the Department of Defense or other government agencies, quick-turn jobs, or products where high quality must be guaranteed will stay. And the region has yet to fully mesh its creative capabilities with manufacturing.

Manufacturing in Southern California is an activity that needs to be looked at in new ways and nurtured. In 2010, it will still be important to the region and many of its residents.

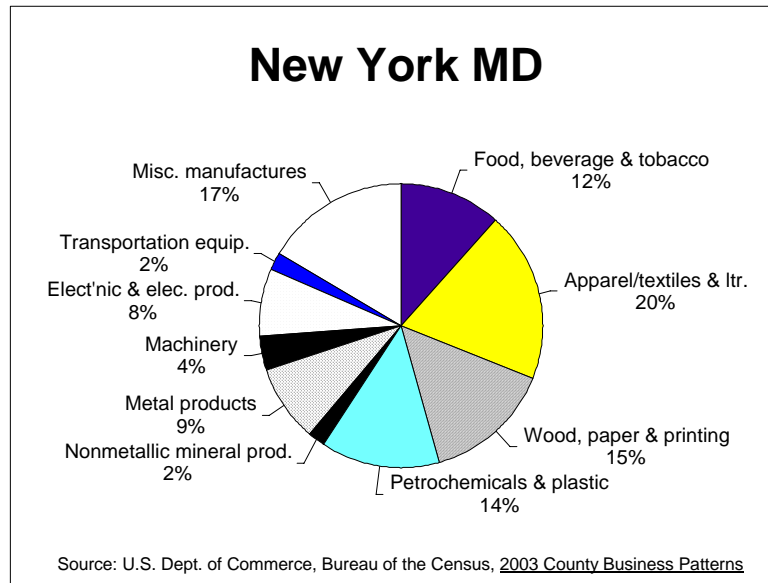
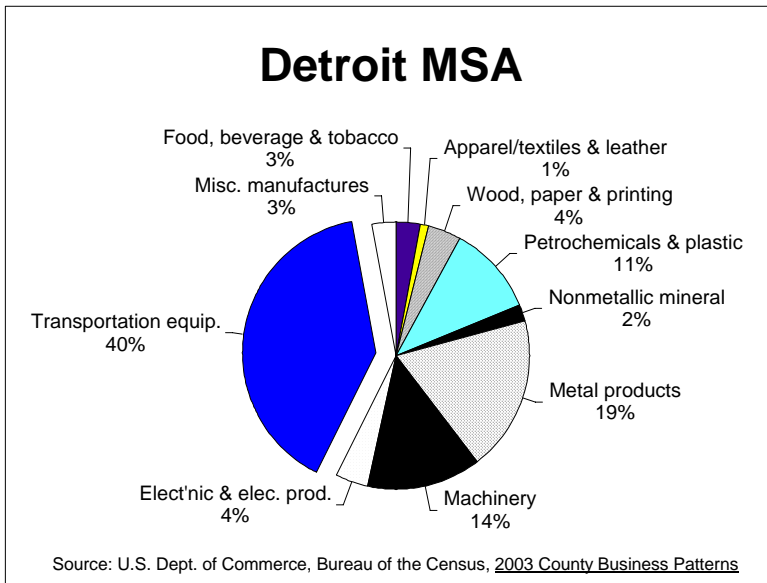
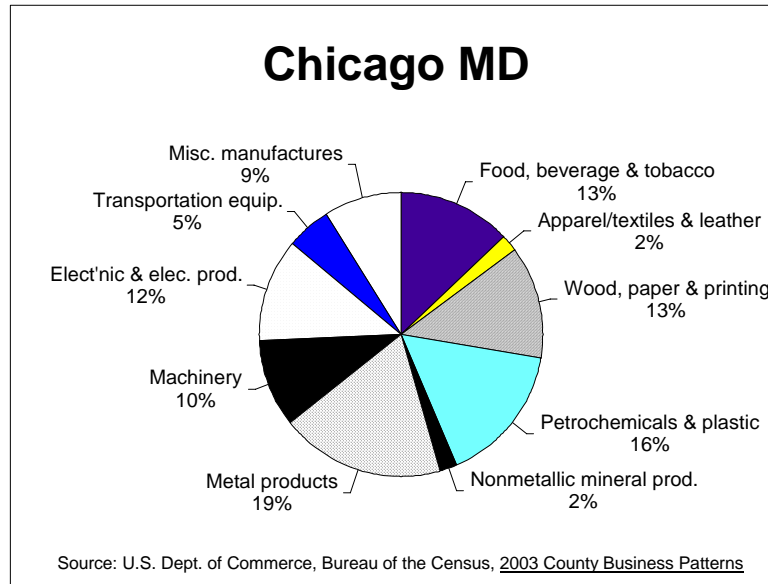
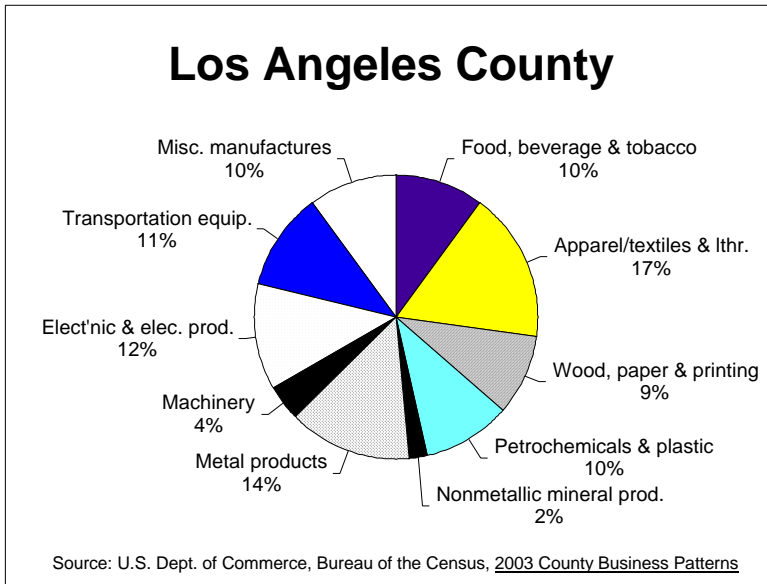
Statistical Appendices

Table 20: Metropolitan Manufacturing Employment Statistics, March 2003

NAICS	Industry	Los Angeles County/MD	Chicago MD	Detroit MSA	New York MD	Houston MSA	Orange County/MD	Minneapolis- St.Paul MSA	Dallas MD	Philadelphia MD	Atlanta MSA	San Jose MSA	San Fran. MD
311	Food	45,621	49,865	7,420	26,438	10,828	11,527	13,592	11,504	16,905	17,487	2,944	5,912
312	Beverage & tobacco products	3,694	3,608	788	950	2,309	874	736	1,729	76	1,061	80	99
313	Textile mills	9,797	109	135	6,639	140	1,667	249	196	1,720	1,211		
314	Textile product mills	8,269	3,958	882	4,654	1,064	3,368	782	2,174	1,747	3,014		279
315	Apparel	68,362	3,549	1,077	34,906	765	8,198	400	2,720	5,295	1,325		5,089
316	Leather & allied products	2,617		131	481	71	561		272				
321	Wood products	5,647	4,411	1,118	1,486	3,325	2,133	2,536	4,048	1,176	4,782	294	211
322	Paper	10,696	15,147	2,418	9,117	1,966	3,492	6,638	5,025	8,488	5,741	1,356	485
323	Printing & related support activities	29,172	33,488	6,701	23,893	7,335	10,691	19,911	11,970	15,047	11,428	2,173	4,033
324	Petroleum & coal products	5,518	2,111	964	455	7,403	106	291	1,011	1,757	336		
325	Chemicals	22,777	23,151	8,765	19,182	33,448	8,991	6,241	6,341	17,184	9,306	1,536	138
326	Plastics & rubber products	25,145	38,474	19,229	12,168	8,913	14,116	12,016	9,630	7,463	15,501	1,129	695
327	Nonmetallic mineral products	9,397	8,885	4,814	3,772	5,101	3,330	2,671	6,752	3,425	8,531	2,548	1,025
331	Primary metals	10,482	12,731	8,646	2,334	1,970	1,548	4,140	2,211	3,489	1,717	414	
332	Fabricated metal products	60,889	66,172	41,520	17,789	37,002	22,772	27,106	19,107	18,009	14,006	10,131	2,609
333	Machinery	21,224	41,909	36,720	8,929	25,566	11,119	21,857	9,308	8,358	6,840	9,327	700
334	Computer & electronic products	49,241	29,112	6,585	12,883	44,174	39,749	33,878	43,432	9,083	6,474	76,339	5,684
335	Electrical equip., appliance, & comp.	12,920	19,219	3,319	5,971	4,703	7,284	3,135	2,740	4,357	2,591	3,498	1,591
336	Transportation equipment	57,964	19,023	108,559	3,773	4,078	9,756	1,749	16,403	11,062	5,984	349	543
337	Furniture & related products	27,197	12,957	3,241	9,586	3,416	6,135	7,223	7,374	5,596	5,929	1,260	1,533
339	Misc. (medical, jewelry, toys...)	25,343	22,614	5,823	30,074	7,842	18,732	15,805	9,089	9,983	7,176	9,206	2,062
Total		511,972	410,493	268,855	235,480	211,419	186,149	180,956	173,036	150,220	130,440	122,584	32,688

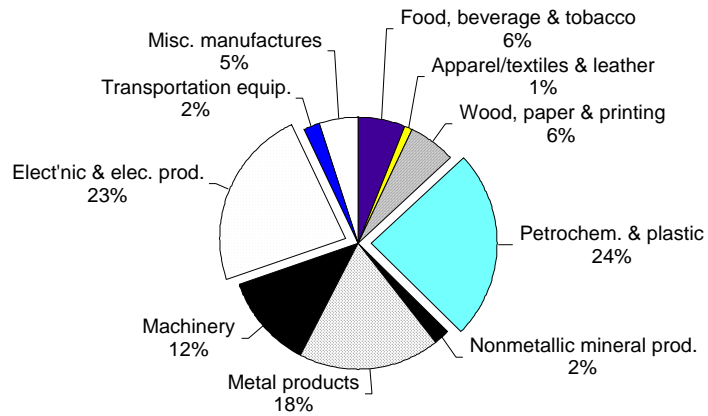
Source: US Dept. of Commerce, Bureau of the Census, 2003 County Business Patterns

Charts: A Comparison of the Manufacturing Base of Selected Metro Areas
Los Angeles County is more diversified than most other manufacturing centers



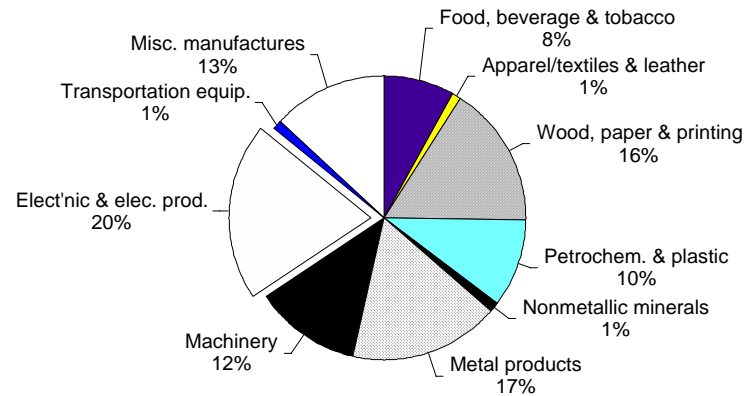
A Comparison of the Manufacturing Base of Selected Metro Areas (cont.)

Houston MSA



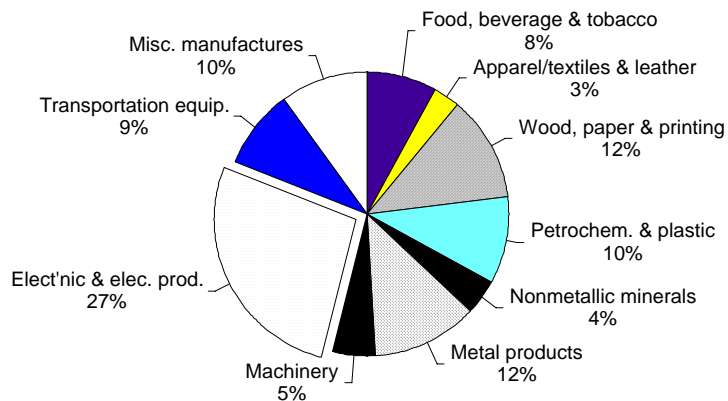
Source: U.S. Dept. of Commerce, Bureau of the Census, [2003 County Business Patterns](#)

Minneapolis-St. Paul MD



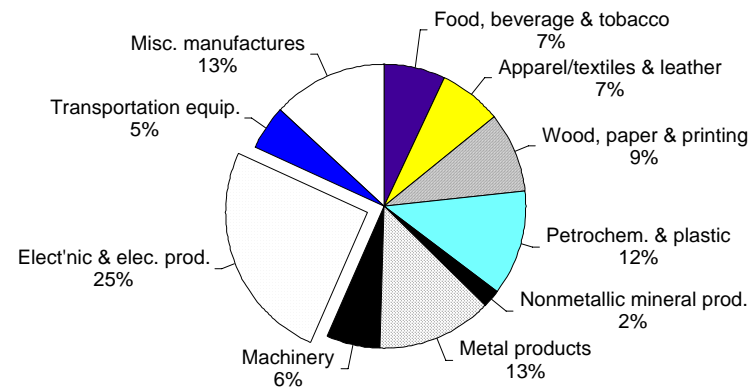
Source: U.S. Dept. of Commerce, Bureau of the Census, [2003 County Business Patterns](#)

Dallas MD



Source: U.S. Dept. of Commerce, Bureau of the Census, [2003 County Business Patterns](#)

Orange County MD



Source: U.S. Dept. of Commerce, Bureau of the Census, [2003 County Business Patterns](#)

Table 21: Los Angeles County Manufacturing Base, March 2003

NAICS	Industry Sector	No. of Employees (March, 2003)	Annual Payroll (\$mil.)	Average Annual Wage (\$)	Average Hourly Wage (\$)*	No. of Establishments (March, 2003)	Facing Foreign Competition
	Total Manufacturing	511,972	19,601.0	38,285	18.41	16,638	Y
311	Food mfg	45,621	1,467.9	32,175	15.47	1,164	Y
312	Beverage & tobacco product mfg	3,694	179.1	48,493	23.31	55	
313	Textile mills	9,797	236.7	24,160	11.62	292	
314	Textile product mills	8,269	208.1	25,167	12.10	329	Y
315	Apparel manufacturing	68,362	1,442.9	21,106	10.15	3,710	Y
316	Leather & allied product mfg	2,617	63.6	24,309	11.69	103	Y
321	Wood product mfg	5,647	143.9	25,487	12.25	294	
322	Paper mfg	10,696	431.2	40,312	19.38	208	
323	Printing & related support activities	29,172	1,099.0	37,674	18.11	1,514	Y
324	Petroleum & coal products mfg	5,518	408.7	74,069	35.61	56	Y
325	Chemical mfg	22,777	1,043.2	45,800	22.02	532	Y
326	Plastics & rubber products mfg	25,145	821.6	32,676	15.71	532	Y
327	Nonmetallic mineral product mfg	9,397	322.6	34,327	16.50	335	
331	Primary metal mfg	10,482	352.0	33,582	16.15	237	Y
332	Fabricated metal product mfg	60,889	2,188.9	35,950	17.28	2,532	Y
333	Machinery mfg	21,224	887.5	41,815	20.10	833	Y
334	Computer & electronic product mfg	49,241	2,783.3	56,524	27.18	761	Y
335	Electrical equip, appliance & comp mfg	12,920	484.4	37,494	18.03	318	Y
336	Transportation equipment mfg	57,964	3,488.4	60,182	28.93	471	Y
337	Furniture & related product mfg	27,197	726.9	26,726	12.85	1,005	Y
339	Miscellaneous mfg	25,343	821.0	32,396	15.57	1,357	

Table 22: Orange County Manufacturing Base, March 2003

NAICS	Industry Sector	No. of Employees (March, 2003)	Annual Payroll (\$mil.)	Average Annual Wage (\$)	Average Hourly Wage (\$)*	No. of Establishments (March, 2003)	Facing Foreign Competition
	Total Manufacturing	186,149	7,605.2	40,856	19.64	5,542	Y
311	Food mfg	11,527	260.3	22,580	10.86	270	Y
312	Beverage & tobacco product mfg	874	35.1	40,195	19.32	22	
313	Textile mills	1,667	41.0	24,594	11.82	41	
314	Textile product mills	3,368	101.7	30,197	14.52	120	Y
315	Apparel manufacturing	8,198	216.9	26,463	12.72	365	Y
316	Leather & allied product mfg	561	14.6	26,052	12.52	26	Y
321	Wood product mfg	2,133	65.3	30,612	14.72	113	
322	Paper mfg	3,492	162.3	46,464	22.34	68	
323	Printing & related support activities	10,691	381.3	35,670	17.15	640	Y
324	Petroleum & coal products mfg	106	6.3	59,764	28.73	10	Y
325	Chemical mfg	8,991	381.8	42,462	20.41	194	Y
326	Plastics & rubber products mfg	14,116	451.4	31,977	15.37	252	Y
327	Nonmetallic mineral product mfg	3,330	127.6	38,326	18.43	133	
331	Primary metal mfg	1,548	54.3	35,071	16.86	59	Y
332	Fabricated metal product mfg	22,772	847.5	37,216	17.89	1,031	Y
333	Machinery mfg	11,119	504.4	45,367	21.81	389	Y
334	Computer & electronic product mfg	39,749	2,272.1	57,161	27.48	608	Y
335	Electrical equip, appliance & comp mfg	7,284	298.1	40,918	19.67	153	Y
336	Transportation equipment mfg	9,756	384.3	39,391	18.94	222	Y
337	Furniture & related product mfg	6,135	192.0	31,298	15.05	228	Y
339	Miscellaneous mfg	18,732	806.9	43,075	20.71	598	

* Average hourly wage = Average annual wage / 52 weeks / 40 hrs/week

Source: US Dept. of Commerce, Bureau of the Census, 2003 County Business Patterns

Table 23: Riverside County Manufacturing Base, March 2003

NAICS	Industry Sector	No. of Employees (March, 2003)	Annual Payroll (\$mil.)	Average Annual Wage (\$)	Average Hourly Wage (\$)*	No. of Establishments (March, 2003)	Facing Foreign Competition
	Total Manufacturing	53,649	1,831.9	34,146	16.42	1,564	Y
311	Food mfg	2,559	82.5	32,231	15.50	97	Y
312	Beverage & tobacco product mfg	864	28.2	32,600	15.67	18	
313	Textile mills		not disclosed			9	
314	Textile product mills	456	8.6	18,914	9.09	33	Y
315	Apparel manufacturing	531	8.2	15,409	7.41	44	Y
316	Leather & allied product mfg		not disclosed			5	Y
321	Wood product mfg	2,848	88.1	30,918	14.86	64	
322	Paper mfg	707	27.0	38,163	18.35	18	
323	Printing & related support activities	1,978	67.3	34,028	16.36	119	Y
324	Petroleum & coal products mfg	71	3.3	46,394	22.30	5	Y
325	Chemical mfg	1,792	75.3	42,026	20.20	47	Y
326	Plastics & rubber products mfg	5,856	195.2	33,340	16.03	92	Y
327	Nonmetallic mineral product mfg	2,891	108.9	37,680	18.12	89	
331	Primary metal mfg	954	34.5	36,175	17.39	31	Y
332	Fabricated metal product mfg	7,241	241.4	33,337	16.03	306	Y
333	Machinery mfg	2,287	93.7	40,967	19.70	112	Y
334	Computer & electronic product mfg	3,222	144.0	44,682	21.48	67	Y
335	Electrical equip, appliance & comp mfg	798	24.3	30,464	14.65	26	Y
336	Transportation equipment mfg	7,554	249.3	32,997	15.86	93	Y
337	Furniture & related product mfg	3,445	95.4	27,691	13.31	126	Y
339	Miscellaneous mfg	7,275	247.8	34,064	16.38	163	

Table 24: San Bernardino County Manufacturing Base, March 2003

NAICS	Industry Sector	No. of Employees (March, 2003)	Annual Payroll (\$mil.)	Average Annual Wage (\$)	Average Hourly Wage (\$)*	No. of Establishments (March, 2003)	Facing Foreign Competition
	Total Manufacturing	68,275	2,266.4	33,195	15.96	2,125	Y
311	Food mfg	4,925	140.9	28,605	13.75	133	Y
312	Beverage & tobacco product mfg	293	11.2	38,184	18.36	9	
313	Textile mills	416	8.2	19,810	9.52	11	
314	Textile product mills	450	10.8	23,907	11.49	32	Y
315	Apparel manufacturing		not disclosed			60	Y
316	Leather & allied product mfg		not disclosed			6	Y
321	Wood product mfg	3,691	95.6	25,911	12.46	100	
322	Paper mfg	1,425	62.4	43,793	21.05	33	
323	Printing & related support activities	1,911	53.0	27,738	13.34	159	Y
324	Petroleum & coal products mfg	299	16.3	54,425	26.17	16	Y
325	Chemical mfg	2,274	94.9	41,726	20.06	90	Y
326	Plastics & rubber products mfg	8,350	263.5	31,561	15.17	175	Y
327	Nonmetallic mineral product mfg	5,545	223.5	40,304	19.38	97	
331	Primary metal mfg	3,234	140.2	43,343	20.84	47	Y
332	Fabricated metal product mfg	9,969	340.8	34,185	16.44	416	Y
333	Machinery mfg	3,538	139.5	39,436	18.96	161	Y
334	Computer & electronic product mfg	2,261	83.1	36,732	17.66	80	Y
335	Electrical equip, appliance & comp mfg	2,116	62.9	29,716	14.29	42	Y
336	Transportation equipment mfg	5,880	188.6	32,079	15.42	123	Y
337	Furniture & related product mfg	7,104	195.3	27,489	13.22	168	Y
339	Miscellaneous mfg	4,035	126.9	31,448	15.12	167	

* Average hourly wage = Average annual wage / 52 weeks / 40 hrs/week

Source: US Dept. of Commerce, Bureau of the Census, 2003 County Business Patterns

Table 25: San Diego County Manufacturing Base, March 2003

NAICS	Industry Sector	No. of Employees (March, 2003)	Annual Payroll (\$mil.)	Average Annual Wage (\$)	Average Hourly Wage (\$)*	No. of Establishments (March, 2003)	Facing Foreign Competition
	Total Manufacturing	108,705	4,846.5	44,584	21.43	3,376	Y
311	Food mfg	6,304	177.2	28,103	13.51	201	Y
312	Beverage & tobacco product mfg	782	33.1	42,315	20.34	26	
313	Textile mills	378	11.0	29,143	14.01	23	
314	Textile product mills	786	19.8	25,164	12.10	87	Y
315	Apparel manufacturing	2,626	59.1	22,521	10.83	145	Y
316	Leather & allied product mfg	333	9.2	27,601	13.27	20	Y
321	Wood product mfg	874	29.7	34,010	16.35	68	
322	Paper mfg	854	29.2	34,206	16.45	31	
323	Printing & related support activities	5,501	169.7	30,849	14.83	389	Y
324	Petroleum & coal products mfg	69	4.7	68,638	33.00	10	Y
325	Chemical mfg	6,301	365.7	58,034	27.90	149	Y
326	Plastics & rubber products mfg	5,566	208.7	37,495	18.03	134	Y
327	Nonmetallic mineral product mfg	1,635	59.1	36,162	17.39	95	
331	Primary metal mfg	352	11.1	31,588	15.19	29	Y
332	Fabricated metal product mfg	9,102	356.5	39,172	18.83	472	Y
333	Machinery mfg	7,349	362.5	49,324	23.71	195	Y
334	Computer & electronic product mfg	24,542	1,422.1	57,944	27.86	395	Y
335	Electrical equip, appliance & comp mfg	2,196	123.3	56,127	26.98	63	Y
336	Transportation equipment mfg	14,455	604.0	41,784	20.09	143	Y
337	Furniture & related product mfg	3,927	112.6	28,668	13.78	240	Y
339	Miscellaneous mfg	14,773	678.2	45,906	22.07	461	

Table 26: Ventura County Manufacturing Base, March 2003

NAICS	Industry Sector	No. of Employees (March, 2003)	Annual Payroll (\$mil.)	Average Annual Wage (\$)	Average Hourly Wage (\$)*	No. of Establishments (March, 2003)	Facing Foreign Competition
	Total Manufacturing	35,351	1,945.7	55,040	26.46	1,015	Y
311	Food mfg	1,205	38.4	31,863	15.32	59	Y
312	Beverage & tobacco product mfg		not disclosed			8	
313	Textile mills		not disclosed			8	
314	Textile product mills		not disclosed			17	Y
315	Apparel manufacturing		not disclosed			29	Y
316	Leather & allied product mfg		not disclosed			2	Y
321	Wood product mfg		not disclosed			13	
322	Paper mfg	1,080	50.2	46,464	22.34	13	
323	Printing & related support activities	979	34.4	35,164	16.91	82	Y
324	Petroleum & coal products mfg		not disclosed			4	Y
325	Chemical mfg		not disclosed			36	Y
326	Plastics & rubber products mfg	2,737	90.7	33,124	15.93	44	Y
327	Nonmetallic mineral product mfg	1,146	38.1	33,259	15.99	33	
331	Primary metal mfg	628	20.0	31,887	15.33	13	Y
332	Fabricated metal product mfg	2,488	99.6	40,025	19.24	193	Y
333	Machinery mfg	3,771	221.0	58,608	28.18	96	Y
334	Computer & electronic product mfg	8,314	388.4	46,713	22.46	137	Y
335	Electrical equip, appliance & comp mfg	937	43.5	46,429	22.32	25	Y
336	Transportation equipment mfg	1,865	95.6	51,245	24.64	41	Y
337	Furniture & related product mfg		not disclosed			40	Y
339	Miscellaneous mfg	2,459	95.7	38,906	18.71	122	

* Average hourly wage = Average annual wage / 52 weeks / 40 hrs/week

Source: US Dept. of Commerce, Bureau of the Census, 2003 County Business Patterns

Table 27: Aerospace / High-Tech Employment

(Employment in thousands)

<u>Los Angeles County</u>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Computer & electronic product	126.9	110.2	96.4	87.5	79.0	78.9	80.6	81.9	78.6	73.9	70.5	69.2	64.4	60.2	59.8	60.5
<i>Computer & peripheral equip.</i>	49.1	41.2	35.7	35.4	34.6	34.9	34.6	34.2	32.6	30.6	30.1	28.6	24.3	21.4	21.0	20.8
<i>Electronic instrument</i>	77.7	69.0	60.7	52.2	44.4	44.1	46.0	47.7	46.0	43.3	40.5	40.5	40.1	38.8	38.8	39.7
Aerospace product & parts	130.0	118.7	106.7	86.8	73.4	64.6	62.5	61.5	65.1	59.1	52.2	47.1	43.8	39.9	39.8	38.4
Pharmaceutical & medicine	4.5	5.2	5.5	5.6	5.6	5.7	5.9	6.2	6.7	6.8	6.8	6.9	7.0	6.3	5.5	5.4
Total of these industries	261.4	234.1	208.6	179.9	158.0	149.2	149.0	149.6	150.4	139.8	129.5	123.2	115.2	106.4	105.1	104.3
<u>Orange County</u>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Computer & electronic product	58.1	55.7	52.6	48.4	47.3	47.0	49.8	50.1	51.5	49.6	50.7	49.5	44.2	41.8	42.3	42.5
<i>Computer & peripheral equip.</i>	10.5	9.3	9.1	8.8	7.1	6.3	6.2	5.7	6.1	5.7	5.9	5.8	5.5	5.6	N/D	N/D
<i>Communications equip.</i>	2.6	2.5	2.7	2.7	3.1	3.1	3.3	3.9	4.4	4.7	5.0	5.2	4.0	3.0	N/D	N/D
<i>Semiconductor & electronic comp.</i>	15.3	14.0	13.2	12.7	13.1	15.0	18.2	18.7	18.8	18.5	20.1	19.8	16.5	13.4	13.7	14.3
<i>Electronic instrument</i>	26.7	27.3	25.9	22.4	21.5	18.3	17.3	17.3	18.6	17.4	16.6	16.2	15.9	17.9	18.5	18.1
Aerospace product & parts	20.9	18.2	15.2	12.7	11.4	11.1	11.4	13.1	13.9	13.8	14.3	13.0	11.7	10.9	11.1	11.3
Total of these industries	79.0	73.9	67.8	61.1	58.7	58.1	61.2	63.2	65.4	63.4	65.0	62.5	55.9	52.7	53.4	53.8
<u>Ventura County</u>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Computer & electronic product	8.9	9.3	9.2	9.5	9.6	9.5	9.9	10.6	10.7	11.0	12.0	11.8	10.6	9.8	9.0	8.8
<u>San Diego County</u>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Computer & electronic product	32.5	31.2	28.3	27.2	26.3	27.3	28.0	29.7	32.5	33.6	33.4	30.5	26.7	25.7	25.5	26.4
<i>Computer & peripheral equip.</i>	5.7	5.0	3.9	4.0	3.9	4.1	4.2	4.7	5.0	5.4	5.4	5.5	5.2	5.2	4.3	3.9
<i>Communications equip.</i>	4.0	3.4	3.4	3.4	3.7	3.9	4.5	5.3	5.6	6.2	6.1	5.6	4.8	4.8	5.1	5.0
<i>Audio & video equip.</i>	3.3	3.8	3.9	3.8	3.9	4.2	4.3	4.5	5.2	5.3	5.6	3.1	2.7	2.4	2.0	2.4
<i>Semiconductor & electronic comp.</i>	8.5	8.8	8.4	8.0	7.5	7.8	7.7	8.3	10.1	9.9	10.1	10.2	8.5	7.9	8.0	8.0
<i>Electronic instrument</i>	11.1	10.3	8.8	8.0	7.2	7.3	7.3	6.9	6.7	6.7	6.3	6.1	5.5	5.5	6.0	7.1
Aerospace product & parts	22.9	21.5	15.9	10.6	8.7	6.7	5.4	5.8	6.7	6.0	6.2	6.4	6.0	5.4	5.2	5.6
Total of these industries	55.4	52.7	44.2	37.8	35.0	34.0	33.4	35.5	39.2	39.6	39.6	36.9	32.7	31.1	30.7	32.0

Table 28: Apparel & Textiles Employment

(Employment in thousands)

<u>Los Angeles County</u>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Textile mills	8.3	9.1	9.3	9.9	11.1	11.6	11.9	13.0	13.5	14.2	14.2	12.4	11.9	10.4	10.8	10.7
Textile product mills	10.9	8.5	13.7	17.6	12.4	12.2	13.8	14.2	14.4	13.7	13.4	12.3	11.3	10.5	9.6	9.2
Apparel	90.2	91.8	90.0	84.5	91.7	100.5	103.9	101.6	98.2	93.5	92.3	80.6	72.9	69.3	66.4	61.5
Total of these industries	109.4	109.4	113.0	112.0	115.2	124.3	129.6	128.8	126.1	121.4	119.9	105.3	96.1	90.2	86.8	81.4
<u>Orange County</u>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Textile & apparel	11.5	10.3	9.5	9.4	10.4	12.4	13.0	13.3	13.9	14.3	15.4	14.4	13.2	13.8	14.0	12.6
<u>Riverside-San Bernardino PMSA</u>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Textile mills	9.4	9.8	9.9	10.2	10.9	12.2	12.7	13.4	13.0	13.5	14.1	13.7	13.8	13.8	14.1	14.2

Source: California Employment Development Department

Table 29: Industrial Vacancy Rates

(% vacant)

	Los Angeles County submarkets										
	Central Los Angeles	Mid- Cities	San Fernando Valley	South Bay	San Gabriel Valley	Los Angeles County	Orange County	Inland Empire	Ventura County	San Diego County	Southern California
95Q1	8.6	7.6	13.6	10.2	7.0	9.4	13.0	9.5	7.1	11.8	10.1
95Q2	8.1	6.0	12.1	9.4	7.7	8.8	12.9	8.0	7.3	10.9	9.4
95Q3	8.3	6.1	10.3	8.7	6.4	8.2	12.9	9.1	7.2	10.9	9.1
95Q4	8.5	7.0	9.8	8.1	6.3	8.0	12.5	8.9	6.9	11.1	9.0
96Q1	8.7	5.9	8.9	8.2	6.8	8.0	11.1	8.8	6.5	11.1	8.8
96Q2	8.0	5.7	8.3	8.5	6.5	7.7	11.1	8.1	6.3	11.8	8.6
96Q3	7.7	6.7	7.1	8.1	6.1	7.3	9.6	8.7	6.1	10.9	8.0
96Q4	7.6	6.7	7.1	7.5	6.7	7.2	9.5	8.4	6.3	8.8	7.7
97Q1	6.9	6.5	6.7	7.0	6.1	6.7	9.3	7.7	7.5	8.1	7.3
97Q2	7.4	6.3	6.1	6.7	5.1	6.5	9.1	7.4	6.9	9.7	7.1
97Q3*	7.0	6.2	6.1	6.0	4.3	6.0	8.5	9.7	9.2	10.1	7.5
97Q4	6.3	5.9	5.9	6.9	5.9	6.2	8.9	9.6	7.4	9.4	7.4
98Q1	4.5	6.5	5.4	5.8	5.5	5.3	8.4	9.3	4.6	9.0	6.6
98Q2	4.8	5.1	3.1	5.6	6.3	4.9	7.4	9.2	1.3	8.0	6.0
98Q3	5.0	5.8	4.8	5.2	5.8	5.2	8.0	6.8	8.4	8.4	6.2
98Q4	3.9	8.2	5.9	5.5	6.9	5.6	7.0	8.6	7.3	7.8	6.5
99Q1	2.0	9.7	9.0	4.2	6.9	5.4	6.3	8.0	7.5	10.9	6.4
99Q2	2.9	8.1	6.2	4.4	5.2	5.2	7.1	8.0	7.7	11.8	6.4
99Q3	1.3	5.7	6.1	4.5	5.3	4.1	7.6	8.1	7.5	12.2	5.9
99Q4	1.3	6.5	6.2	4.1	5.2	4.3	7.6	8.3	7.2	11.3	6.0
00Q1	2.1	6.3	7.0	3.8	4.0	4.1	7.7	7.8	7.0	9.1	5.7
00Q2	3.5	5.0	5.2	3.8	3.9	5.2	8.3	7.2	6.7	8.0	6.3
00Q3	3.6	5.5	4.9	3.3	3.6	4.0	5.9	6.9	6.4	7.5	5.1
00Q4	3.3	5.4	4.1	3.6	2.8	3.6	6.1	7.7	6.2	7.3	5.2
01Q1	4.0	5.7	4.1	4.0	4.0	4.2	5.9	8.2	7.5	7.0	5.5
01Q2	1.4	7.6	5.2	4.5	3.8	3.9	4.8	7.3	7.9	6.7	5.9
01Q3	2.0	7.6	5.7	4.6	3.6	4.7	6.6	6.8	8.1	8.2	5.7
01Q4	2.6	6.4	7.3	4.5	5.4	4.5	6.8	7.0	8.5	6.1	7.9
02Q1	3.2	6.1	7.5	4.3	3.5	4.6	7.2	7.7	8.7	6.9	7.4
02Q2	3.0	6.3	7.1	3.8	3.1	4.3	9.0	7.6	9.0	7.0	6.9
02Q3	2.7	5.1	7.0	4.6	2.4	4.1	7.5	8.2	9.0	7.3	5.9
02Q4	2.5	4.8	6.7	4.7	2.7	4.0	7.4	7.4	7.0	7.0	5.5
03Q1	2.3	4.1	4.9	4.5	2.7	3.5	8.7	7.9	8.6	7.0	5.2
03Q2	2.4	2.8	3.8	3.9	2.8	3.1	8.6	7.9	8.4	9.1	5.3
03Q3	1.8	4.5	4.6	3.4	2.2	3.0	7.9	6.6	9.7	10.2	5.7
03Q4	1.9	4.3	4.8	4.0	2.3	3.2	8.0	6.9	9.7	11.4	5.7
04Q1	1.9	4.7	4.7	4.1	2.4	3.3	8.9	6.4	9.0	9.0	5.2
04Q2	1.6	4.1	4.7	3.3	1.8	2.9	8.9	5.6	10.5	7.6	4.6
04Q3	1.6	4.0	3.8	2.7	1.5	2.5	8.2	4.2	9.0	8.0	4.3
04Q4	1.2	4.6	3.9	2.6	1.2	2.4	8.1	4.4	8.6	7.6	4.2
05Q1	1.1	3.9	3.5	2.5	1.5	2.2	5.6	3.6	6.0	7.5	3.5
05Q2	1.0	4.3	3.2	2.2	1.2	2.1	5.4	2.7	5.0	7.1	3.2
05Q3	1.0	3.4	2.3	2.2	1.2	1.8	5.1	2.8	2.9	6.8	3.0
05Q4	1.3	2.7	2.3	2.8	1.6	2.0	4.4	2.7	3.1	6.8	3.0

Notes: * database modification for 97Q3 Ventura County data

Source: Grubb & Ellis Research Services

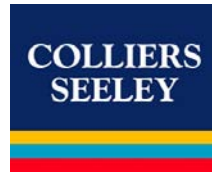
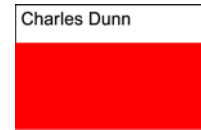
Index of Statistical Tables

Table 1: Major Manufacturing Centers in the U.S.	2
Table 2: State Manufacturing Employment.....	3
Table 3: Employment Change in the Top 10 States in Manufacturing -- 1990 vs. 2005	4
Table 4: Employment Change in the Top 10 Metro Areas in Manufacturing -- 1990 vs. 2005.....	4
Table 5: Employment in the Largest Manufacturing Sectors in Los Angeles County	5
Table 6: Size Distribution of Manufacturing Firms in Los Angeles County, 2004Q3.....	6
Table 7: Manufacturing Employment by Region of Los Angeles County, 2005Q2	6
Table 8: Employment in the Largest Manufacturing Sectors in Orange County	7
Table 9: Size Distribution of Manufacturing Firms in Orange County, 2004Q3	7
Table 10: Manufacturing Employment by Region of Orange County, 2005Q2.....	7
Table 11: Employment in the Largest Manufacturing Sectors in Riverside-San Bernardino	8
Table 12: Size Distribution of Manufacturing Firms in Riverside-San Bernardino, 2004Q3	8
Table 13: Employment in the Largest Manufacturing Sectors in San Diego County	9
Table 14: Size Distribution of Manufacturing Firms in San Diego County, 2004Q3	9
Table 15: Employment in the Largest Manufacturing Sectors in Ventura County	10
Table 16: Size Distribution of Manufacturing Firms in Ventura County, 2004Q3	10
Table 17: Shares of Manufacturing Employment, 2005	11
Table 18: Industrial Space Inventory	13
Table 19: Manufacturing Employment in Southern California	15
Table 20: Metropolitan Manufacturing Employment Statistics, March 2003	17
Charts: A Comparison of the Manufacturing Base of Selected Metro Areas.....	18
Table 21: Los Angeles County Manufacturing Base, March 2003	20
Table 22: Orange County Manufacturing Base, March 2003.....	20
Table 23: Riverside County Manufacturing Base, March 2003	21
Table 24: San Bernardino County Manufacturing Base, March 2003.....	21
Table 25: San Diego County Manufacturing Base, March 2003.....	22
Table 26: Ventura County Manufacturing Base, March 2003.....	22
Table 27: Aerospace / High-Tech Employment	23
Table 28: Apparel & Textiles Employment.....	23
Table 29: Industrial Vacancy Rates	24

To view and sign up for e-EDGE, LAEDC's free weekly economic news broadcast, please visit <http://www.e-edge.org>



The LAEDC thanks the following Business Leaders for their generous support:



For information about LAEDC membership, contact Amy Grat 213-236-4835.